

Relay and Industrial Control Manufacturing: 2002

Issued December 2004

EC02-311-335314 (RV)

2002 Economic Census

Manufacturing

Industry Series



U S C E N S U S B U R E A U

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



CONTENTS

Introduction to the Economic Census	v
Manufacturing	ix

Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002	2
3. Detailed Statistics by Industry: 2002	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002	5
6a. Products Statistics: 2002 and 1997	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	7
7. Materials Consumed by Kind: 2002 and 1997.....	9

Appendixes

A. Explanation of Terms	A-1
B. NAICS Codes, Titles, and Descriptions	B-1
C. Methodology	C-1
D. Geographic Notes	--
E. Metropolitan and Micropolitan Statistical Areas	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997	F-1

-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
335314, Relay and industrial control manufacturing	2002..	1 058	1 137	47 866	2 034 340	25 406	46 630	705 077	5 443 554	4 689 322	10 178 264	'208 461
	2001..	N	N	55 902	2 286 731	30 790	53 896	877 435	5 482 260	5 117 423	10 658 056	219 409
	2000..	N	N	61 492	2 485 411	34 726	62 336	996 142	6 181 424	5 573 703	11 768 305	236 205
	1999..	N	N	63 721	2 493 257	36 545	66 916	1 016 059	6 082 110	5 480 239	11 655 718	275 041
	1998..	N	N	67 034	2 525 233	36 955	69 003	983 992	6 282 555	5 584 574	12 014 570	417 421
	1997..	1 241	1 318	67 885	2 417 135	38 478	70 580	964 660	6 229 198	5 606 007	11 826 508	339 086

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
335314, Relay and industrial control manufacturing												
United States	1	1 137	369	47 866	2 034 340	25 406	46 630	705 077	5 443 554	4 689 322	10 178 264	'208 461
Arizona	1	9	2	122	5 431	60	129	1 108	9 659	6 238	16 021	'223
Arkansas	2	6	3	155	6 054	83	163	1 898	26 414	24 643	45 488	'499
California	2	129	42	4 742	199 949	2 625	5 341	72 575	374 961	222 602	607 429	'11 203
Colorado	—	16	5	516	20 672	271	559	6 047	40 435	37 962	78 949	'994
Connecticut	3	40	10	1 093	43 687	577	893	14 284	83 573	52 695	134 818	'1 883
Florida	2	46	14	1 066	43 513	592	1 128	15 165	102 960	73 355	178 373	'8 514
Georgia	—	19	8	1 365	54 176	853	1 659	22 949	242 876	258 331	512 370	'2 524
Idaho	3	7	4	153	4 239	92	69	1 254	8 122	4 640	12 869	'99
Illinois	2	89	32	2 759	112 015	1 647	3 119	49 459	237 359	253 774	498 768	'5 735
Indiana	4	27	12	837	30 888	564	1 178	14 116	57 647	53 969	109 887	'3 833
Iowa	—	8	6	660	28 391	287	469	10 310	104 522	45 147	149 821	'646
Kansas	—	9	4	397	14 824	216	358	4 915	30 407	18 787	49 748	'933
Massachusetts	5	39	14	2 415	122 577	974	1 772	26 968	238 859	171 899	411 254	'9 109
Michigan	1	68	18	1 483	62 731	864	1 319	24 899	119 957	89 679	209 840	'3 621
Minnesota	1	34	13	1 532	62 548	808	1 535	21 646	130 318	109 474	238 541	'25 040
Nebraska	1	5	1	276	3 973	228	340	2 199	12 027	3 502	15 404	'213
New Jersey	7	40	9	989	42 365	553	1 104	11 673	97 129	72 925	169 841	'2 033
New York	3	71	28	2 432	87 392	1 478	3 124	39 269	218 940	150 630	368 740	'7 697
North Carolina	—	32	17	4 246	168 223	2 802	5 417	91 097	569 327	573 194	1 143 479	'15 491
Ohio	—	67	22	2 124	86 830	1 098	2 224	31 947	683 226	370 597	1 051 669	'3 995
Oklahoma	5	10	3	158	6 053	81	144	1 686	16 370	5 520	21 569	'414
Pennsylvania	1	56	14	1 722	78 944	861	1 804	22 167	168 686	239 504	407 713	'26 820
Rhode Island	2	8	1	146	5 373	90	178	1 439	11 511	5 632	18 030	'554
South Carolina	—	10	5	1 084	39 881	768	1 287	21 230	101 344	92 393	194 499	'1 869
Tennessee	1	12	3	180	8 367	79	176	2 314	14 801	7 537	22 527	'463
Texas	4	66	17	1 252	54 219	637	1 311	16 690	156 669	146 456	301 861	'5 746
Utah	9	7	2	173	8 697	115	77	831	28 594	23 164	51 844	'772
Virginia	—	25	8	3 084	175 464	1 153	2 332	43 894	624 912	284 788	926 056	'9 572
Washington	2	29	8	529	24 651	260	504	7 807	52 851	41 077	94 074	'2 588
West Virginia	2	6	1	153	6 156	94	190	2 696	11 698	10 636	22 987	'182
Wisconsin	—	50	22	8 325	361 800	3 588	4 792	96 920	667 383	1 062 667	1 739 944	'39 214

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
335314, Relay and industrial control manufacturing	
Companies ¹	number.. 1 058
All establishments ²	number.. 1 137
Establishments with 1 to 19 employees	number.. 768
Establishments with 20 to 99 employees	number.. 259
Establishments with 100 employees or more	number.. 110
All employees ³	number.. 47 866
Total compensation	\$1,000.. 2 527 546
Annual payroll	\$1,000.. 2 034 340
Total fringe benefits	\$1,000.. 493 206
Production workers, average for year	number.. 25 406
Production workers on March 12	number.. 26 024
Production workers on May 12	number.. 25 719
Production workers on August 12	number.. 25 006
Production workers on November 12	number.. 24 794
Production worker hours	\$1,000.. 46 630
Production worker wages	\$1,000.. 705 077
Total cost of materials	\$1,000.. 4 689 322
Materials, parts, containers, packaging, etc., used	\$1,000.. 3 498 499
Resales	\$1,000.. 1 102 291
Purchased fuels	\$1,000.. 6 923
Purchased electricity	\$1,000.. 34 796
Contract work	\$1,000.. 46 813
Quantity of electricity purchased for heat and power	1,000 kWh.. 531 069
Quantity of electricity generated less sold for heat and power	1,000 kWh.. S
Total value of shipments	\$1,000.. 10 178 264
Primary products value of shipments	\$1,000.. 7 922 334
Secondary products value of shipments	\$1,000.. 634 564
Total miscellaneous receipts	\$1,000.. 1 621 366
Value of resales	\$1,000.. 1 419 245
Contract receipts	\$1,000.. 109 161
Other miscellaneous receipts	\$1,000.. 92 960
Primary products specialization ratio	percent.. 93
Value of primary products shipments made in all industries	\$1,000.. 8 731 828
Value of primary products shipments made in this industry	\$1,000.. 7 922 334
Value of primary products shipments made in other industries	\$1,000.. 809 494
Coverage ratio	percent.. 91
Value added	\$1,000.. 5 443 554
Total inventories, beginning of year	\$1,000.. 1 348 236
Finished goods inventories	\$1,000.. 281 148
Work-in-process inventories	\$1,000.. 398 744
Materials and supplies inventories	\$1,000.. 668 344
Total inventories, end of year	\$1,000.. 1 272 799
Finished goods inventories	\$1,000.. 265 403
Work-in-process inventories	\$1,000.. 369 101
Materials and supplies inventories	\$1,000.. 638 295
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '3 104 281
Total capital expenditures (new and used)	\$1,000.. '208 461
Buildings and other structures (new and used)	\$1,000.. '37 235
Machinery and equipment (new and used)	\$1,000.. '171 226
Automobiles, trucks, etc., for highway use	\$1,000.. '4 983
Computers and peripheral data processing equipment	\$1,000.. '30 087
All other expenditures for machinery and equipment	\$1,000.. '136 156
Total retirements	\$1,000.. '133 298
Gross value of depreciable assets at end of year	\$1,000.. '3 179 444
Depreciation charges during year	\$1,000.. '183 878
Total rental payments	\$1,000.. 99 650
Buildings and other structures	\$1,000.. 66 847
Machinery and equipment	\$1,000.. 32 803
Total other expenses ⁴	\$1,000.. 415 456
Response coverage ratio ⁵	percent.. 69
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 26 863
Communications services ⁴	\$1,000.. 16 884
Legal services ⁴	\$1,000.. 7 047
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 4 221
Advertising and promotional services ⁴	\$1,000.. 25 654
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 10 188
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 2 087
Management consulting and administrative services ⁴	\$1,000.. 11 657
Taxes and license fees ⁴	\$1,000.. 12 625
All other expenses ⁴	\$1,000.. 298 230

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
335314, Relay and industrial control manufacturing											
All establishments	1	1 137	47 866	2 034 340	25 406	46 630	705 077	5 443 554	4 689 322	10 178 264	'208 461
Establishments with—											
1 to 4 employees	9	429	932	36 259	550	904	10 372	76 494	56 007	132 475	'1 913
5 to 9 employees	7	187	1 241	55 729	687	1 387	16 068	126 237	88 624	214 587	'2 840
10 to 19 employees	4	152	2 106	93 482	1 107	2 197	29 480	191 756	145 509	339 375	'4 049
20 to 49 employees	3	174	5 528	235 352	2 851	5 606	81 141	502 348	335 564	834 825	'11 867
50 to 99 employees	2	85	5 854	250 875	3 151	6 216	81 555	677 211	447 695	1 121 369	'23 213
100 to 249 employees	1	74	11 614	447 880	6 734	12 538	168 013	995 781	994 384	2 000 783	'58 139
250 to 499 employees	—	25	8 360	337 128	4 656	9 122	131 524	1 344 441	1 032 490	2 386 624	'61 425
500 to 999 employees	—	9	i	D	D	D	D	D	D	D	D
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	1	h	D	D	D	D	D	D	D	D
Administrative records ⁴	9	550	2 196	91 158	1 281	2 385	24 057	197 942	150 958	348 876	'5 151

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
335314	Relay and industrial control manufacturing	1 137	47 866	2 034 340	25 406	46 630	705 077	5 443 554	4 689 322	10 178 264	'208 461
3353141	Relays for electronic circuitry, industrial control overload, and switchgear type	51	3 422	126 836	2 109	4 198	55 770	316 759	184 578	502 767	'10 286
3353143	Specific-purpose industrial controls .	143	13 279	630 920	6 003	11 682	191 929	2 006 351	1 432 737	3 465 880	'55 525
3353146	General-purpose industrial controls .	166	22 396	899 523	12 679	21 932	349 566	2 379 412	2 513 942	4 905 268	'122 751
3353147	Parts for industrial controls and motor-control accessories	27	1 323	54 214	674	1 316	20 475	92 750	75 226	167 390	'4 752

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
335314	Relay and industrial control manufacturing	2002.. N	X	X	8 731 828
	1997.. N		X	X	10 915 290
3353141	Relays for electronic circuitry, industrial control overload, and switchgear type	2002.. N	X	X	625 799
	1997.. N		X	X	971 104
33531411	Relays for electronic circuitry, industrial control overload, and switchgear type	2002.. N	X	X	625 799
	1997.. N		X	X	971 104
3353141100	Relays for electronic circuitry, industrial control overload, and switchgear type ¹	2002.. 103	X	X	625 799
	1997.. 135		X	X	971 104
3353143	Specific-purpose industrial controls	2002.. N	X	X	2 892 991
	1997.. N		X	X	3 772 940
33531431	Specific-purpose industrial controls	2002.. N	X	X	2 892 991
	1997.. N		X	X	3 772 940
3353143100	Specific-purpose industrial controls ¹	2002.. 199	X	X	2 892 991
	1997.. 389		X	X	3 772 940
3353146	General-purpose industrial controls	2002.. N	X	X	3 747 258
	1997.. N		X	X	N
33531461	General-purpose industrial controls	2002.. N	X	X	3 747 258
	1997.. N		X	X	N
3353146100	General-purpose industrial controls ¹	2002.. 209	X	X	3 747 258
	1997.. N		X	X	N
3353147	Parts for industrial controls and motor-control accessories	2002.. N	X	X	537 071
	1997.. N		X	X	640 320
33531471	Parts for industrial controls and motor-control accessories	2002.. N	X	X	537 071
	1997.. N		X	X	640 320
3353147100	Parts for industrial controls and motor-control accessories ¹	2002.. 103	X	X	537 071
	1997.. 146		X	X	640 320
335314W	Relay and industrial control manufacturing, nsk, total	2002.. N	X	X	928 709
	1997.. N		X	X	754 273
335314WY	Relay and industrial control manufacturing, nsk, total	2002.. N	X	X	928 709
	1997.. N		X	X	754 273
335314WYWW	Relay and industrial control manufacturing, nsk, for nonadministrative-record establishments	2002.. N	X	X	632 445
	1997.. N		X	X	498 755
335314WYWY	Relay and industrial control manufacturing, nsk, for administrative-record establishments	2002.. N	X	X	296 264
	1997.. N		X	X	255 518

¹For additional detail, see Current Industrial Report MA335A, Switchgear and Industrial Controls.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3353141	Relays for electronic circuitry, industrial control overload, and switchgear type	
	United States	2002.. 625 799
		1997.. 971 104
	California	2002.. 131 548
		1997.. 159 861
	Connecticut	2002.. 3 274
		1997.. 13 236
	Florida	2002.. 41 099
		1997.. 47 318
	Illinois	2002.. 44 355
		1997.. 60 443
	Iowa	2002.. 17 682
		1997.. N
	New Jersey	2002.. 16 817
		1997.. 18 353
	New York	2002.. 61 999
		1997.. 33 548
	Ohio	2002.. 31 416
		1997.. 54 813
	Pennsylvania	2002.. 12 528
		1997.. 28 680
	Texas	2002.. 10 045
		1997.. 48 333
	Wisconsin	2002.. 48 836
		1997.. 68 296
3353143	Specific-purpose industrial controls	
	United States	2002.. 2 892 991
		1997.. 3 772 940
	California	2002.. 169 671
		1997.. 245 052
	Colorado	2002.. 53 023
		1997.. 8 958
	Illinois	2002.. 265 494
		1997.. 300 587
	Indiana	2002.. 2 430
		1997.. N
	Massachusetts	2002.. 202 680
		1997.. 271 930
	Michigan	2002.. 110 516
		1997.. 176 125
	Minnesota	2002.. 116 225
		1997.. 60 304
	New Jersey	2002.. 102 650
		1997.. 44 490
	New York	2002.. 47 636
		1997.. 99 443
	North Carolina	2002.. 115 296
		1997.. 121 358
	Ohio	2002.. 479 803
		1997.. 612 361
	Oklahoma	2002.. 2 274
		1997.. N
	Pennsylvania	2002.. 157 317
		1997.. 215 854
	South Carolina	2002.. 6 713
		1997.. N
	Tennessee	2002.. 13 370
		1997.. 18 497
	Texas	2002.. 49 054
		1997.. 106 596
	Virginia	2002.. 435 693
		1997.. 514 095
	Washington	2002.. 19 539
		1997.. 28 820
	Wisconsin	2002.. 230 289
		1997.. 398 600
3353146	General-purpose industrial controls	
	United States	2002.. 3 747 258
		1997.. N
	California	2002.. 137 816
		1997.. N
	Colorado	2002.. 33 203
		1997.. N
	Connecticut	2002.. 63 123
		1997.. N
	Florida	2002.. 52 339
		1997.. N
	Illinois	2002.. 181 512
		1997.. N
	Indiana	2002.. 32 678
		1997.. N
	Massachusetts	2002.. 103 896
		1997.. N
	Michigan	2002.. 33 250
		1997.. N
	Minnesota	2002.. 148 990
		1997.. N
	New Jersey	2002.. 5 925
		1997.. N
	New York	2002.. 175 149
		1997.. N
	North Carolina	2002.. 459 466
		1997.. N
	Ohio	2002.. 262 491
		1997.. N
	Pennsylvania	2002.. 225 524
		1997.. N
	Texas	2002.. 187 614

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3353146	General-purpose industrial controls—Con.	
	United States—Con.	
	Washington	1997.. N
	Wisconsin	2002.. 38 836
		1997.. N
		2002.. 886 805
		1997.. N
3353147	Parts for industrial controls and motor-control accessories	
	United States	2002.. 537 071
		1997.. 640 320
	California	2002.. 33 558
		1997.. 30 981
	Connecticut	2002.. 2 231
		1997.. 14 995
	Florida	2002.. 40 420
		1997.. N
	Illinois	2002.. 15 632
		1997.. 33 514
	Michigan	2002.. 12 421
		1997.. 6 302
	North Carolina	2002.. 90 073
		1997.. 92 253
	Ohio	2002.. 5 238
		1997.. 88 249
	Pennsylvania	2002.. 8 822
		1997.. 23 308
	South Carolina	2002.. 31 978
		1997.. N
	Texas	2002.. 28 349
		1997.. 31 132
	Virginia	2002.. 110 788
		1997.. N
	Wisconsin	2002.. 72 354
		1997.. 78 208

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
335314	Relay and industrial control manufacturing		
00900001	Total materials .....2002..	X	3 498 499
	.....1997..	X	4 664 805
332000A9	Sheet metal products (excluding stampings) .....2002..	X	79 371
	.....1997..	X	92 324
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	30 132
	.....1997..	X	57 374
33200087	All other fabricated metal products (excluding forgings, castings, sheet metal products, bolts, nuts, screws, rivets, washers, and screw machine products) .....2002..	X	85 187
	.....1997..	X	96 682
33210000	Forgings .....2002..	X	2 668
	.....1997..	X	N
33100035	Castings, rough and semifinished .....2002..	X	26 102
	.....1997..	X	22 528
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 429
	.....1997..	X	15 408
33120016	Steel sheet and strip (including tinplate) .....2002..	X	20 833
	.....1997..	X	N
33120019	Steel structural shapes and sheet piling (excluding castings, forgings, and fabricated metal products) .....2002..	X	4 105
	.....1997..	X	D
33120091	All other steel shapes and forms (excluding castings, forgings, fabricated metal products, bars, bar shapes, plate, sheet, strip, structural shapes, and sheet piling) .....2002..	X	19 365
	.....1997..	X	D
33140001	Nonferrous metal smelter and refinery shapes, including precious metal (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 277
	.....1997..	X	20 942
33100061	Aluminum and aluminum-base alloy shapes and forms (excluding wire, castings, forgings, and fabricated metal products) .....2002..	X	16 039
	.....1997..	X	14 718
33142123	Copper and copper-base alloy shapes and forms (excluding wire, castings, forgings, and fabricated metal products) .....2002..	X	19 713
	.....1997..	X	25 933
33100081	All other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	3 364
	.....1997..	X	24 386
33100087	Nonferrous wire and cable (including magnet wire, bare or insulated wire, etc.) .....2002..	X	38 700
	.....1997..	X	59 140
33531401	Industrial electrical control equipment purchased from other companies .....2002..	X	484 079
	.....1997..	X	552 141
33531403	Industrial electrical control equipment received from other plants of the same company .....2002..	X	281 617
	.....1997..	X	495 593
32711301	Porcelain, steatite, and other ceramic electrical products .....2002..	X	4 097
	.....1997..	X	7 145
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes .....2002..	X	31 255
	.....1997..	X	43 024
32521105	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. ....2002..	X	25 766
	.....1997..	X	32 532
33531301	Switches (excluding snap, toggle and push, and circuit breakers) .....2002..	X	64 538
	.....1997..	X	38 007
001900B5	Resistors, capacitors, transformers, and other electronic-type components (excluding electron tubes and semiconductors) .....2002..	X	165 752
	.....1997..	X	236 066
33441200	Printed circuit boards (without inserted components) for electronic circuitry .....2002..	X	135 650
	.....1997..	X	134 074
001900B9	Semiconductors, microprocessors, memory, ASICs and power semiconductor devices .....2002..	X	198 900
	.....1997..	X	146 228
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	699 407
	.....1997..	X	1 597 667
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	1 035 153
	.....1997..	X	928 036

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.